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5 BEFORE THE STATE OF WASHINGTON  
ENERGY FACILITY SITE EVALUATION COUNCIL

6 In the Matter of )  
7 Application No. 99-1 )  
8 SUMAS ENERGY 2, INC. ) EXHIBIT \_\_\_\_\_ (JTS-T)  
9 SUMAS ENERGY 2 GENERATION )  
10 FACILITY )  
\_\_\_\_\_ )

11  
12 WHATCOM COUNTY'S PREFILED TESTIMONY  
13 WITNESS # \_\_\_\_\_ : JOHN T. SPROUL

14 Q: Please state your title, full name, and professional affiliation.

15 A: My name is Dr. John Timothy Sproul. I am a Watershed Program Specialist for Whatcom  
16 County's Water Resources Division in Public Works.

17 Q: What are the subjects of your testimony?

18 A: After providing some additional information on my professional background and  
19 expertise, I will provide the Council with some additional insights as to the possible  
20 impacts which SE2's aquifer use may have upon Whatcom County. In the course of  
doing so, I will suggest several alternative means for investigating the potential economic  
impacts which SE2's water usage may have upon the County and tactics which the  
Council may wish to employ to guard against negative impacts.

21 Q: Please, summarize your professional credentials and some background experiences  
22 relevant to this subject testimony?

23 A: I have a Bachelors Degree in natural science with an emphasis in marine biology and  
24 alternative energy systems. My Masters Degree is in Marine Resource Economics. I  
received my Doctorate Degree in Fisheries Science from Hokkaido University with a  
specialization in Business Economics, Trade, and international policy of natural resource  
management.

1 Since March 2000, I have been employed by Whatcom County to perform watershed  
2 management tasks that include sustainable development policy analysis. This has  
3 primarily been in context of water resource issues. I also perform duties associated with  
4 program coordination for the Water Resource Inventory Area 1 (WRIA 1) Watershed  
Management Project.

5 Before accepting this current position with Whatcom County, I was employed by the U.S.  
6 Federal government as Fisheries Management Specialist and Economist for the National  
7 Marine Fisheries Service, Sustainable Fisheries Division, Alaska Regional Office. Prior to  
8 that the University of British Columbia employed me as a Research Associate Faculty for  
9 approximately five years. My formal institutional affiliations at UBC included the  
10 Sustainable Development Research Institute (SDRI), The Fisheries Centre, Economics  
Department, and Westwater Research Institute. My research at UBC included attention to  
the Sumas Watershed and Abbotsford-Sumas aquifer. This research was part of my  
broader research review of regional economic history and sustainable development policy  
considerations associated with the cross-boundary ecosystem of the Lower Fraser River  
valley of British Columbia and northern Whatcom County in Washington State.

11 Q: Dr. Sproul, was this research presented and published under peer review?

12 A: Yes, results of this work included presentation at professional conferences and published  
13 in book form as part of the Lower Fraser Basin Ecosystem Study: Prospects for  
Sustainability.

14 Q: Dr. Sproul, in your view will the utilization of the projected amount of water used from  
15 the Abbotsford-Sumas aquifer by the Sumas Generation 2 Facility, pose any positive or  
negative (net) impacts on Whatcom County? If so, why?

16 A: Well, I would answer that question in at least two parts. First, it is my professional opinion  
17 that the proposed facility may pose both beneficial and negative impacts on Whatcom  
County. However, there currently is insufficient information and analysis to determine  
18 what the *net* effect on Whatcom County would be with regard to the social, economic, and  
ecological implications of such water use in the area over time.

19 Q: Is the information necessary to perform some of that analysis on the horizon?

20 A: Yes, on a more distant horizon. Efforts are currently underway in the WRIA 1 watershed  
planning process that will help decision makers answer such questions in a few years.

21 Q: What are preferred ways to evaluate the impact of a project such as SE2 on a watershed?

22 A: It is preferable to evaluate proposed socioeconomic development projects such as the SE2  
23 facility from a sustainability perspective. In today's context, sustainability is usually  
24 defined as achieving an acceptable balance of social, economic, and ecological objectives  
for current human needs without jeopardizing such potential for future generations. At the  
25 risk of stating the obvious, it should be pointed out that this challenge exists for water  
resource managers in Whatcom County who seek such balance between current and future

1 water use among human and broader ecological needs such as habitat for threatened or  
2 endangered species (e.g. ESA listed salmon).

3 Q: Before you go on, what do you mean by the phrase: "WRIA 1 watershed planning  
4 process?"

5 A: A process of realizing improved sustainable water resource policy in Whatcom County is  
6 currently under development as part of the Watershed Management Plan for the Water  
7 Resource Inventory Area 1 (WRIA 1). Over the past year, the WRIA 1 planning process  
8 has established an extensive arrangement (see attached organizational chart) that integrates  
9 stakeholder interests and government authorities in this watershed development project.

10 Intergovernmental agreements now exist that establish a decision making process to  
11 facilitate approval and implementation of water management policy in Whatcom County  
12 under an adaptive management approach. The decision making government entities for  
13 this process include representatives from Tribal, County, municipal, and Public Utility  
14 District No. 1. Furthermore, the Washington State Department of Ecology is engaged and  
15 supportive at many levels of this process. By 2003, the WRIA 1 Watershed Management  
16 Plan and computer-based Decision Support System model (DSS) is expected to address  
17 water quantity, quality, instream flow, and fish habitat issues.

18 Q: The water to be used in the SE2 plant is from what aquifer?

19 A: The Abbotsford-Sumas aquifer.

20 Q: Is the Abbotsford-Sumas aquifer included in the WRIA-1 planning process?

21 A: Yes, the Abbotsford-Sumas aquifer is an important study topic for the WRIA 1 technical  
22 scope of work. It is a focus in both the water quantity and water quality component of the  
23 watershed planning project. In fact, a Technical Team may soon be approved under the  
24 WRIA 1 process to focus specifically on groundwater and primarily address Sumas  
25 Aquifer management issues related to water use.

Q: What is the current timeline for the WRIA 1 process?

A: Although action items are being identified in the project for early implementation, the  
final WRIA 1 Watershed Management Plan and DSS (with subsequently integrated  
models) will require approximately two years for completion.

Q: If the results of the WRIA 1 planning process will not be known for about two years, how  
could this data be useful in relation to SE2?

A: Keep in mind the WRIA 1 Watershed Plan will help water managers develop alternative  
adaptive management strategies for selecting and implementing solutions. Analysis of  
these alternatives will be scientifically based and grounded in actual conditions. As a  
result, Whatcom County residents will benefit from water managers who are enabled with  
better tools to periodically evaluate the net benefit of current and proposed water use  
projects, such as the proposed SE2 facility, based on regularly updated information.  
Given the constantly changing conditions and opportunities of our social, economic, and

1 environmental surroundings, it would be an advantage to the public to require significant  
2 water use projects be subject to such periodic review using the WRIA 1 Watershed Plan  
3 and supporting analytical models. Given the breadth, focus, and indefinite longevity for  
4 use by regional water managers, I recommend the results from the WRIA 1 planning be  
5 consider as a future evaluation tool for the Sumas Generation 2 Facility.

6 Q: How could the Council utilize the WRIA 1 findings and conclusions in the future in  
7 relation to SE2?

8 A: If a permit is issued for the proposed facility, I recommend it be issued on conditions that  
9 include periodic (e.g. 2 years) reevaluation of the project's net benefits, cost, and water  
10 use implications to local economic, social, and ecological concerns. In addition, I  
11 recommend such conditional permits establish provisions for mitigation if determined  
12 feasible and appropriate.

13 Q: Since we presently do not have the results of the WRIA 1 planning process to utilize, are  
14 there alternative analytic methodologies available?

15 A: Yes, in the absence of an integrated Decision Support System, such as the WRIA 1  
16 watershed planning model, to evaluate alternative water use projects, additional  
17 independent analyses appropriate to each relevant discipline (e.g. economics, sociology,  
18 hydrology, fish habitat ecology) could be used to more fully determine the net economic  
19 benefit of the proposed SE2 Facility.

20 Q: What do you mean when you say to "determine the net economic benefit" of the project?

21 A: Determining "net" economic benefit (positive or negative) is a well-recognized approach  
22 to evaluate the direct market impacts of a proposed activity (e.g. beneficial water use)  
23 relative to other alternatives. Comparing evaluations of alternative water use projects  
24 (such as benefit cost analysis or net present value analysis) conducted on each beneficial  
25 water use alternative considered (e.g. comparing with and without scenarios), would  
provide decision makers with important information. This additional information would  
enable them to better judge if the benefits outweigh the costs of a project as well as  
provide an additional way to rank such water use alternatives. In addition, analysis of  
indirect or non-market impacts (e.g. environmental attributes or public goods) could be  
included to more fully consider all such advantages and disadvantages when evaluating  
"net" socioeconomic benefit.

Water resource managers will serve the public good by judging the overall advantages  
and disadvantages of competing water use alternatives. Performing project evaluation  
analyses on each alternative and comparing the results commonly helps do this.  
Commonly accepted analytical methods designed for such comparison include net benefit  
cost analysis, net present value, or contingent valuation.

Q: Does the current analysis of the SE2 project include such an analysis?

A: The current analysis on SE2 does not perform such a review and therefore does not  
contribute sufficient insight to more fully determine the proposed project's net benefit to

1 the public. However, it should be noted that from a public perspective, implementing the  
2 project could make economic sense compared to the no-action alternative under certain  
conditions.

3 Q: Under what circumstances would it make economic sense for the SE2 project to go  
4 forward as compared to not utilizing the water resource?

5 A: For example, all else being equal, this could be the case if there were no public costs  
6 (social, economic, or environmental) associated with using the unused portion of the City  
7 of Sumas water right (proposed action), compared with the condition of real costs  
8 associated with not utilizing the unused portion (no action alternative). This latter point  
9 may be important if full use of the currently unused portion of the water right is needed to  
10 extend the permit's full amount when it comes up for renewal in a few years. Such a "use  
it or lose it" condition may be an important decision factor for supporting this project.  
11 This could be a real concern given the current temporary situation in which few, if any,  
12 new water rights are being issued in the area. Nevertheless, the former condition (i.e. no  
13 public costs) has yet to be clearly determined. Therefore, uncertainty remains whether or  
14 not the overall socioeconomic impact of the proposed project on the public will be  
15 positive or negative.

16 Q: Given the uncertainties, do you have any other suggested courses of action for the Council  
17 to consider in this situation?

18 A: Yes, I would suggest that it may be appropriate that additional specialists (e.g.  
19 hydrologists, soil scientists, fish habitat biologists, air quality experts, sociologist, etc.) be  
20 asked to evaluate the social and ecological aspects of the proposed project and comparable  
21 water use alternatives. These evaluations would further improve the basis for public  
22 decision-makers to consider such choices associated with water use based on sustainable  
23 development criteria focusing on long-term health of the Whatcom County community.

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END OF TESTIMONY

I declare under penalty of perjury that the above testimony is true and correct to the best of  
my knowledge.

Executed at Bellingham, Washington, on this \_\_\_\_\_ day of June, 2000.

By: \_\_\_\_\_  
John T. Sproul, Ph.D.